



WR File NR: S1-28623  
WR Doc ID: 4628960

State of Washington  
**DRAFT**  
Report of Examination for Water Right

<b>PRIORITY DATE</b>	<b>WATER RIGHT NUMBER</b>
May 22, 2009	S1-28623

<b>MAILING ADDRESS</b>	<b>SITE ADDRESS (IF DIFFERENT)</b>
Snohomish County Public Utility District No. 1 2320 California Street PO Box 1107 Everett, WA 98206-1107	

Total Quantity Authorized for Withdrawal or Diversion		
<b>WITHDRAWAL OR DIVERSION RATE</b>	<b>UNITS</b>	<b>ANNUAL QUANTITY (AF/YR)</b>
13	CFS	Non-consumptive

Purpose						
PURPOSE	WITHDRAWAL OR DIVERSION RATE			ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE	UNITS	ADDITIVE	NON-ADDITIVE	
Hydropower	13		CFS	NA	NA	Continuously as available

**REMARKS**

This right is in addition to existing permit S1-24496 and is intended to enhance the power production of the facility when water is available. Originally application S1-28623 was for 48 cfs but was amended down to 13 cfs by the applicant on January 24, 2012

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
<b>ADDITIVE</b>	<b>NON-ADDITIVE</b>	<b>WATER SYSTEM ID</b>	<b>CONNECTIONS</b>
NA	NA	NA	NA

Source Limitations			
<b>SOURCE FACILITY/DEVICE</b>	<b>WITHDRAWAL OR DIVERSION RATE</b>	<b>ANNUAL QUANTITY (AF/YR)</b>	<b>PERIOD OF USE (mm/dd)</b>
Run-of-the-river diversion facility	13 cfs	Non-consumptive	Continuously as available



Source Location (See Attached Map (figure 1) and Aerial Photo (figure 2))			
COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
King	Calligan Creek	North Fork Snoqualmie River	7 - Snohomish

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Run-of-the-river diversion facility			25N	09E	32	SW of SW	47.6016222	-121.6857277
Datum: NAD83/WGS84								

Place of Use (See Attachment 1 and Figures 1 (map) and Figure 2 (Aerial Photo))
<b>PARCELS (NOT LISTED FOR SERVICE AREAS)</b>
Proposed power house to be located at latitude 47.606863888, longitude -121.700000000 on Calligan Creek near river mile 0.2 just above its confluence with the North fork Snoqualmie River. (See attachment 1 and Figures 1 and 2)
<b>LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE</b>
The power house will be located in the NW ¼ of the SW ¼ of section 31, Township 25N, R09E, WM

Proposed Works
The diversion/intake structure will be constructed at river mile 1.9 on Calligan Creek downstream from its outfall from Calligan Lake. The diversion itself will consist of a spillway and a sluiceway. The spillway will be 8 feet above the streambed and approximately 45 feet long and will create an impoundment estimated to be 0.26 acres in size. The crest of the spillway will be at elevation 2,224 feet (1988 NAVD). The water intake structure will consist of a concrete structure with a trash rack, fish screens built to WDFW fish-protection standards, and a closure gate. The diversion will lead to a penstock that runs to the powerhouse facility

Development Schedule		
BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Within one year of issuance of a Project license from the FERC Approximately January 1, 2018	15 years after project start	Estimated to be 2030



#### Measurement of Water Use

The 2 cfs to 15 cfs minimum flow to Calligan Creek will be continuously monitored at the spillway and at the downstream spring site located approximately 4800 feet downstream of the diversion point as defined in the FERC licensing documents.	Continually when diversion is occurring
How often must water use data be reported to Ecology?	Upon Request by Ecology
What volume should be reported?	Total Annual Volume & Other Volume
What rate should be reported?	Other Peak Rate of Withdrawal & Annual Peak Rate of Withdrawal (cfs)

#### Provisions

**Approval to operate the hydroelectric project is contingent upon approval and maintenance of a FERC Hydropower License.**

The facility shall be operated as a run-of-the-river power-generation facility such that the instream flow parameters defined in water right S1-24496 (1994 water right permit for the same project) are met. This means that the following flows must be maintained through the bypass reach of Calligan Creek as measured at the diversion point and at the identified downstream spring site 4,800 feet downstream of the diversion according to the following schedule:

Period of year	Required Flow at Diversion	Required Flow at Downstream Site
May 15 thru September 14	2 cfs	15 cfs
September 15 thru May 14	2 cfs	6 cfs

Note: Flows listed are minimum or natural flow, whichever is less. Should this flow need to be temporarily modified due to operating emergencies beyond the control of the licensee, the Department of Ecology will be consulted, in addition to the agencies identified in the FERC license.

Gauging is required at both sites. During all diversion operations, continuous monitoring will be required at both sites. If required flows at the downstream site cannot be maintained from inflow then additional flows will need to be released at the diversion site. A copy of the plans for the gauge installation will be forwarded to the Department of Ecology for review at the time that submittal of original plans, as required under the FERC license, is made.

Records of cumulative and peak instantaneous diversions of water and instream flow data will be supplied to Ecology upon request



An annual license fee must be paid in advance to the State of Washington, on or before the first day of January of each year according to the schedule provided in section 1 and 2 of 90.16.050 RCW. For this FERC project once in operation, the annual fees set in subsections (1)(a) and (1)(b) apply. The undeveloped or partially developed project is entitled to the exemptions provided in subsection (2)(a) of 90.16.050.

#### **Measurements, Monitoring, Metering and Reporting**

An approved measuring device must be installed and maintained for the diversion point identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", WAC 173-173.

Monitoring of the two gauging stations discussed above will be accomplished continuously during diversion operations as discussed above. The data will be available at a minimum as a running hydrograph for each of the two gauges.

Consistent with FERC licensing conditions, the District will install a stage-discharge gage in Calligan Creek to monitor ramping rates. The gage will record the tailrace stage every 15 minutes for the first three years of the Project's operation, and then at least hourly for the duration of the Project license.

WAC 173-173 describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

#### **Flow Measurements**

Reporting of the required stream-flow data must include:

- Stream Gage Number
- Measurement date and time
- Measurement method
- Measurement accuracy
- Description of the measuring point
- Measuring point elevation.
- Flow measurement at gage in cfs.

#### **Department of Fish and Wildlife Requirement(s)**

The intake(s) must be constructed in accordance with the plans developed and agreed upon in the FERC License and screened in accordance with Department of Fish and Wildlife screening criteria (pursuant to RCW 77.57.010, RCW 77.57.070, and RCW 77.57.040).

#### **Easement and Right-of-Way**

The water source and/or water-transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.



**Water Use Efficiency**

Use of water under this authorization will be contingent upon the water right holder's maintenance of efficient water delivery systems and use of up-to-date water conservation practices consistent with established regulation requirements and facility capabilities.

**Proof of Appropriation**

The water right holder must file the notice of Proof of Appropriation of water (under which the certificate of water right is issued) when the permanent hydropower system has been constructed and the quantity of water required by the project has been put to full beneficial use. The certificate will reflect the extent of the project perfected within the limitations of the superseding permit. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

**Schedule and Inspections**

Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, diversions, stream-flow monitoring, measuring devices and associated systems for compliance with water law.

**Real Estate Excise Tax**

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. Phone: (360) 570-3265. The mailing address is: Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia WA 98504-7477 Internet: <http://dor.wa.gov/>. E-mail: [REETSP@DOR.WA.GOV](mailto:REETSP@DOR.WA.GOV).

**Findings of Facts**

Upon reviewing the investigator's report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I find the issuance of this water right as recommended will not be detrimental to existing rights or the public welfare.

Therefore, I ORDER the requested allocation of 13 cfs from Calligan Creek for hydropower generation be issued, subject to existing rights and the provisions specified above.

**Your Right To Appeal**

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.



- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Street Addresses	Mailing Addresses
<b>Department of Ecology</b> Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	<b>Department of Ecology</b> Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
<b>Pollution Control Hearings Board</b> 1111 Israel RD SW Ste 301 Tumwater, WA 98501	<b>Pollution Control Hearings Board</b> PO Box 40903 Olympia, WA 98504-0903

Signed at Bellevue, Washington, this \_\_\_\_\_ day of \_\_\_\_\_ 2013.

\_\_\_\_\_  
 Jacqueline Klug, Section Manager  
 Water Resources Program

For additional information visit the Environmental Hearings Office Website: <http://www.eho.wa.gov>. To find laws and agency rules visit the Washington State Legislature Website: <http://www1.leg.wa.gov/CodeReviser>.



## INVESTIGATOR'S REPORT

Application for Water Right -- Snohomish County PUD NO. 1

Water Right Control Number S1-28623

F. Michael Krautkramer, Robinson Noble, Inc. (Author)

Douglas H. Wood, Department of Ecology (Reviewer)

## BACKGROUND

This report serves as the written findings of fact concerning Water Right Application Number S1-28623.

### *Cost Reimbursement*

This application is being processed under a cost-reimbursement agreement between the applicant the Department of Ecology. This report has been prepared by Robinson Noble, Inc., Tacoma, Washington

**Table 1 Summary of Requested Water Right**

<b>Applicant Name:</b>	Snohomish County PUD 1
<b>Date of Application:</b>	5/22/2009
<b>Place of Use</b>	Powerhouse at RM 0.2, Calligan Creek

County	Waterbody	Tributary To	WRIA
King	Calligan Creek	North Fork Snoqualmie River	7-Snohomish

Purpose	Rate	Unit	Ac-ft/yr	Begin Season	End Season
Hydropower	13	CFS	nonconsumptive	01/01	12/31
As amended 1/24/2012					

Source Name	Parcel	Well Tag	TwN	Rng	Sec	QQ Q	Latitude	Longitude
Calligan Creek			25N	09E	32	SW/SW	47.601622 22 deg N	121.68572777 deg

CFS = Cubic Feet per Second; Ac-ft/yr = Acre-feet per year; Sec. = Section; QQ Q = Quarter-quarter of a section;  
WRIA = Water Resource Inventory Area; E.W.M. = East of the Willamette Meridian; Datum: NAD83/WGS84.

## Legal Requirements for Approval of Appropriation of Water

### Public Notice

RCW 90.03.280 requires that notice of a water right application be published once a week, for two consecutive weeks, in a newspaper of general circulation in the county or counties where the water is to be stored, diverted and used. Notice of this application was published in the Seattle Times on February 9, 2012 and February 16, 2012 (Ad # 802441600).

### *Consultation with the Department of Fish and Wildlife*

The Department must give notice to the Department of Fish and Wildlife of applications to divert, withdraw or store water. Such consultation has been ongoing throughout the development of this



project including initial FERC Licensing, Allocation of water right S1-24496, and the current project development by Snohomish PUD. The most recent efforts were accomplished by Chris Maynard of the Department of Ecology in consultation with Mr. Hal Beecher. The allocation addressed by the subject application does not alter the streamflow implications addressed in previous actions, and the operations recommendations from these previous review processes remain appropriate. These recommendations are incorporated into the conditions of this action and are reflected in the project planning documents presented by Snohomish County PUD No. 1

The most recent description of the intended operational procedures are presented in the Snohomish PUD FERC Pre-Application Document (Snohomish PUD, 2012) and represent the agreed upon fish protection. This language is copied below:

*"Consistent with previous licensing conditions (1993 license, article 406), the District will release from the diversion weir into Calligan Creek a minimum flow of 2 cfs, as measured at the diversion weir, or inflow to the Project impoundment, whichever is less, for the protection and enhancement of fish and wildlife resources and riparian vegetation in the bypassed reach of Calligan Creek. The District will additionally ensure that a minimum flow of 15 cfs from May 15 through September 14, and 6 cfs from September 15 through May 14, or the combined inflow from Calligan Lake and the spring site, whichever is less, is maintained at the downstream spring site located in the lower portion of the bypass reach (downstream spring site). This flow may be temporarily modified if required by operating emergencies beyond the control of the District, or for short periods upon agreement between the District, USFWS, WDFW, and Ecology. If the flow is so modified, the District shall notify the FERC as soon as possible, but no later than 10 days after each such incident*

#### **Gaging**

*Consistent with previous licensing conditions (1993 license, article 412), the District will install a stage discharge gage in Calligan Creek, to monitor ramping rates. The gage will record the tailrace stage every 15 minutes for the first three years of the Project's operation, and then at least hourly for the duration of the Project license. Stage data will be provided to the agencies and tribes within 30 days after the date of the agencies' or tribes' request.*

#### **Fish Screens**

*Consistent with previous license conditions (1993, article 414), the District will install and operate self-cleaning fish screen system to eliminate the entrainment of resident fish.*

#### **Monitoring**

*Monitoring will be consistent with the previously licensed condition (1993 license, article 415), Trout Monitoring Plan, and previous monitoring studies. See Section 8.2.2 for further details on the trout monitoring survey."*

#### **State Environmental Policy Act (SEPA)**

Snohomish County Public Utility District No. 1 issued a Determination of Nonsignificance (DNS) for the Calligan Creek Hydroelectric Project No. P-13948 on January 30, 2012. The DNS process considered the



water use and water right aspects of the project. SEPA requirements for this project are considered to have been met.

## INVESTIGATION

### Proposed Use and Basis of Water Demand

The subject water allocation will be used as additional water to drive the turbines already planned for under existing water right permit S1-24496. This right will add 13 cfs to the already allocated 75 cfs and can only be exercised when flow in Calligan Creek is sufficient that the exercise of this right does not cause flows to drop below the low flow limits defined in Permit S1-24496 as agreed upon by all reviewing parties to that action. The original application S1-28623 was for 48 cfs. However, on January 24, 2012, Snohomish PUD amended the request to 13 cfs.

The location of the Hydroelectric Project is shown as Attachment 1, as figure 1 following the provisions section, and the components of the project are shown on the aerial photo (Figure 2). Figures 1 and 2 are modified from figures provided in the applicants FERC Pre-Application Document (Snohomish PUD, 2012). Attachment 1 is based on water rights documentation and data within Ecology's electronic databases.

Descriptions of the planned diversion and impoundment as provided in the Snohomish PUD Pre-Application Document for the FERC process are as follows:

#### Diversion Description

A diversion weir and intake structure will be constructed at RM 1.9 on Calligan Creek. The diversion will consist of a low spillway and a sluiceway. The spillway will be 8 feet high above the streambed and approximately 45 feet long. The crest of the spillway will be at elevation 2,224 feet msl (1988 NAVD) (note that the crest elevation is not changed from the 1993 licensed project, the different elevation reflects a change in the Project vertical datum from NVGD of 1929 to NAVD of 1988). The water intake structure will consist of a concrete structure with a trash rack, fish screens built to Washington State Department of Fish and Wildlife (WDFW) fish protection standards (maximum approach velocity less than 0.4 feet/second), and closure gate.

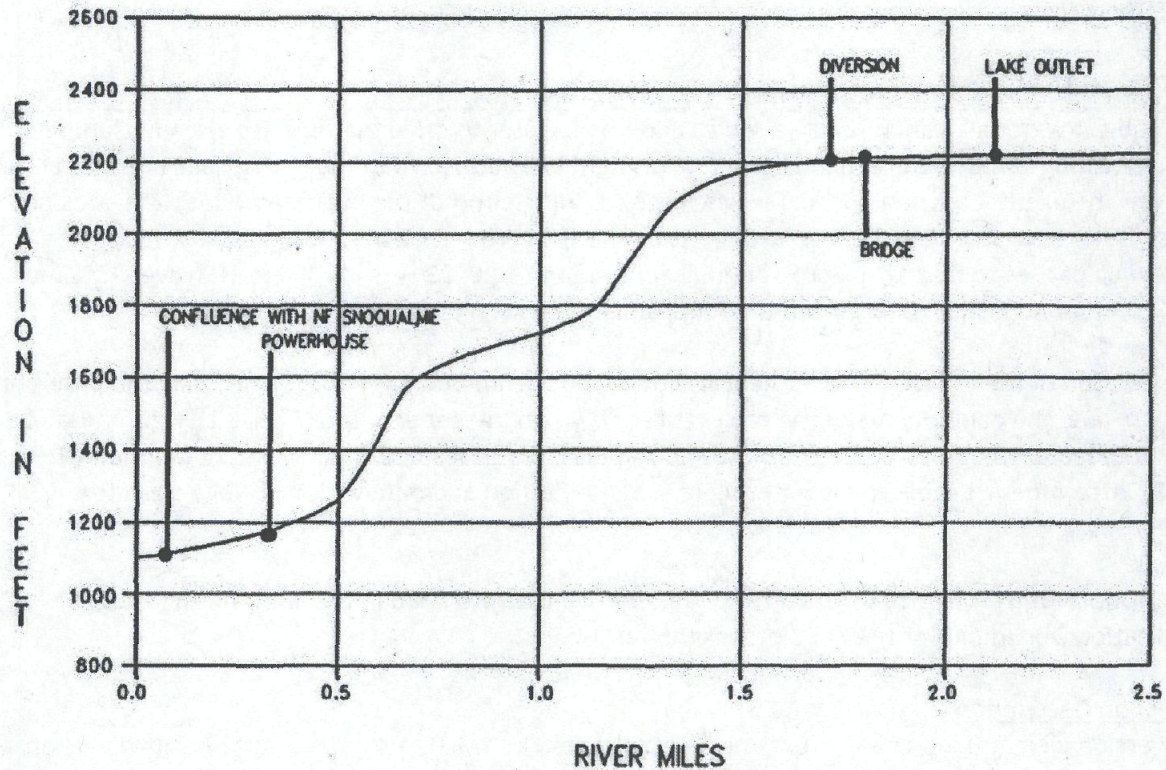
#### Impoundment details.

Surface Area 11,205 ft<sup>2</sup> (0.26 acres)  
Volume 56,025 ft<sup>3</sup> (1.3 acre feet)  
Max Depth 8 feet  
Mean Depth 5 feet  
Flushing Rate 50 cubic feet per second (cfs)  
Shoreline Length 620 feet  
Substrate Composition Cobble and gravel

The gradient of Calligan Creek between Calligan Lake and the confluence is shown below :



From Snohomish PUD Pre-Application Document, Calligan Creek Hydroelectric Project No. P-13948



### Other Rights Appurtenant to the Place of Use

The place of use is the powerhouse located west of the point of diversion (latitude 47.606863888 longitude 121.700000000). The powerhouse already has a primary water right permit S1-24496 which allocates 75 cfs for power generation at this site when water is available. No other water rights are appurtenant to this property.

### Impairment Considerations

The use of water for power generation in a run-of-the-river situation, such as applied for here, is inherently not a consumptive use. The potential for impacts, therefore, exists only in the bypassed reach of the stream. The minimum flows to be maintained while exercising this right have already been established by the conditions of Permit S1-24496. This water right can only be exercised as long as, and to the extent that, the defined flows are met or exceeded at the two identified compliance points (the diversion point and downstream spring site – 4800 feet downstream from the diversion point).

The allocation authorized by this right does not impair Calligan Creek or the waters to which it is tributary by virtue of the conditions imposed herein and initially defined in Permit S1-24496.



These flows are:

Period of year	Required Flow at Diversion	Required Flow at Downstream Site
May 15 thru September 14	2 cfs	15 cfs
September 15 thru May 14	2 cfs	6 cfs

Since there are no other water rights on Calligan Creek between Calligan Lake and its confluence with the North Fork Snoqualmie River, there is no potential for impairment of senior water right holders. Further, instream flow concerns have been adequately addressed through previous water right processes and the FERC licensing process and its related Department of Ecology review. It is, therefore, the finding of this investigation that the allocation of the requested 13 cfs will not impair existing water rights.

#### Water Availability

Stream assessments accomplished as part of the processing of Permit S1-24496 demonstrate that the flow patterns of Calligan Creek allow for the withdrawal of the requested 13 cfs at times within each year. Since the request is for allocation only when such conditions exist that allow for the stream flows to be maintained at prescribed levels and such periods occur on occasion, it is the finding of this investigation that water is available for the allocation as defined and conditioned.

#### Legal Availability

The statutes allow for the allocation of water for power generation(90.54.020(1)) provided it can be used without detriment to the surface water bodies from which it is diverted and to which it is returned (RCW 90.54.020(3)(a). The conditions upon which this allocation would be issued assure that the flows of Calligan Creek will be protected. The use of the requested water is non-consumptive and is consistent with the management and regulatory planning for the Snoqualmie River Basin, particularly as discussed above Snoqualmie Falls. Nothing in this or related investigations or in consultations with WDFW, has indicated that the requested water would not be legally available for allocation. It is, therefore, the finding that the water is legally available to be allocated.

#### Beneficial Use

The proposed use of water for power generation is defined in statute as a beneficial use (RCW 90.54.020(1)).

#### Public Interest Considerations



In that the generation of power is fundamental to the economy of the region and the requested use has not been found to be detrimental to the natural setting, this allocation is not contrary to the public interest.

#### *Consideration of Protests and Comments*

No protests were filed against this application.

#### **Conclusions**

The application is for 13 cfs of additional diversion to the powerhouse when water is available per the conditions of use set in the 1994 water right (S1-24496). This is a quantity to supplement the 75 cfs already authorized for the Calligan Creek Hydropower Project. Since the minimum flow requirements remain the same and additional diversion is only allowed when surplus water is available, this allocation does not have the potential to impact the stream habitat beyond the already accepted conditions. The proposed use is clearly beneficial and does not have the potential to impair existing water rights. Nothing in this enhancement of diversion appears to be contrary to the public interest. As such the conclusion of this investigation is that the requested allocation is justified and should be issued.

#### **RECOMMENDATIONS**

Instream flows shall be maintained as defined in water right permit S1-24496 and reiterated below:

Period of year	Required Flow at Diversion	Required Flow at Downstream Site
May 15 thru September 14	2 cfs	15 cfs
September 15 thru May 14	2 cfs	6 cfs

Gauging is required at the same 2 sites as indicated in the existing permit at the point of diversion and at the "spring site" 4,800 feet downstream of the diversion. In the event that prescribed flows at the downstream site cannot be maintained from inflow, flows will need to be released at the diversion point. A copy of the plans for the stream-gauge installation will be forwarded to Ecology at the time those plans are submitted to FERC, as required the FERC license.

Based on the above investigation and conclusions, I recommend that this request for a water right be approved in the amounts and within the limitations listed below and subject to the provisions listed above.

#### **Purpose of Use and Authorized Quantities**

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

13 cfs (amended by applicant 1/24/2012 from original 48 cfs in application)

Annual acre feet not applicable since this is a nonconsumptive run-of-the-river allocation for



Hydroelectric Power Generation.

Point of Diversion

SW¼, SW¼, Section 32, Township 25 North, Range 09E. W.M. (lat 47.6016222, long 121.6857277)

Place of Use

Powerhouse Facility located in the NW ¼ of the SW ¼ of section 32, Township 25 N, Range 09E, W.M. (latitude 47.606863888, longitude 121.700000000)

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*F. Michael Krautkramer, LHG 643  
Robinson Noble Report Writer*

*Date:*

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*Douglas H. Wood, LHG 942  
Ecology Reviewer*

*Date:*

*If you need this publication in an alternate format, please call Water Resources Program at (360) 407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

Selected References

Report of Examination : S1-24496, Roy Bishop, January 5, 1994

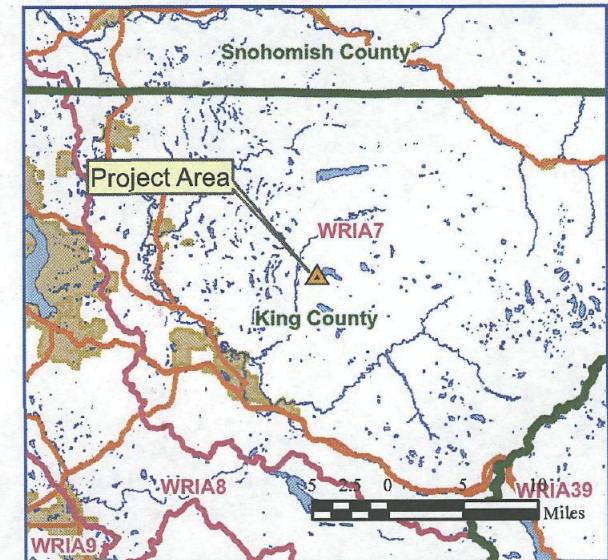
Snohomish County PUD No. 1 Pre-Application Document (PAD) Calligan Creek Hydroelectric Project No. P-13948

Determination of Nonsignificance (DNS) and Adoption of Existing Environmental Documents (WAC 197-11-965; 197-11-970), Snohomish County Public Utility District No. 1, January 30, 2012

Booth - Surficial Geology, Skykomish and Snoqualmie Rivers Area, Washington, Map I-1745



Snohomish Cnty PUD 1  
 Water Right Number S1-28623  
 Sec 32 T25N R 09E W.M.  
 WRIA7 - King County

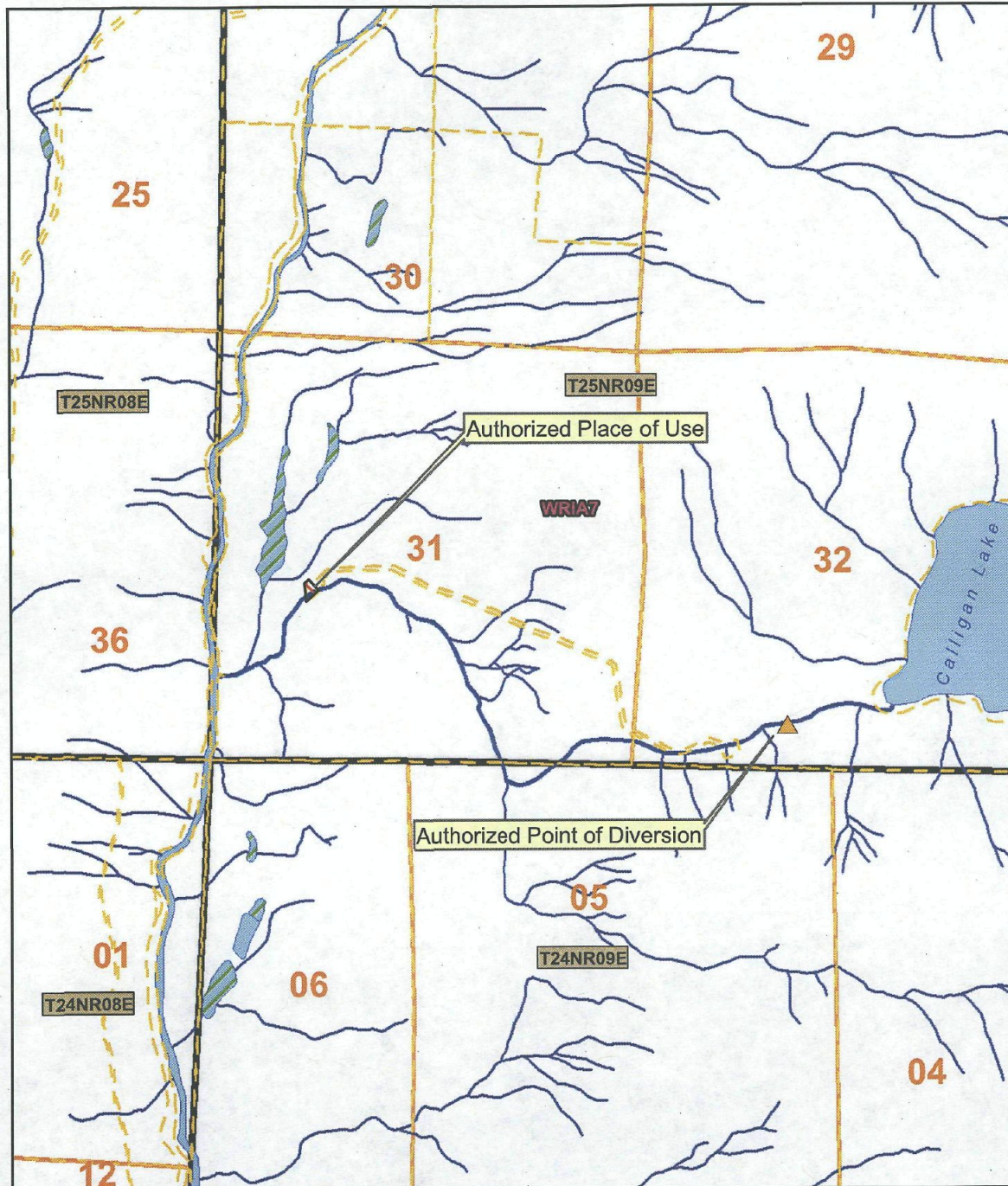


# Legend

- Highways
- WRIA
- cities
- Parcels2007
- Major Water Bodies
- Marsh/wetland
- Townships
- Sections
- Authorized Point of Diversion
- Certificated Place of Use



Place of use and point(s) of diversion/withdrawal are as defined on the cover sheet under the headings, 'LOCATION OF DIVERSION/WITHDRAWAL' and 'LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED.'





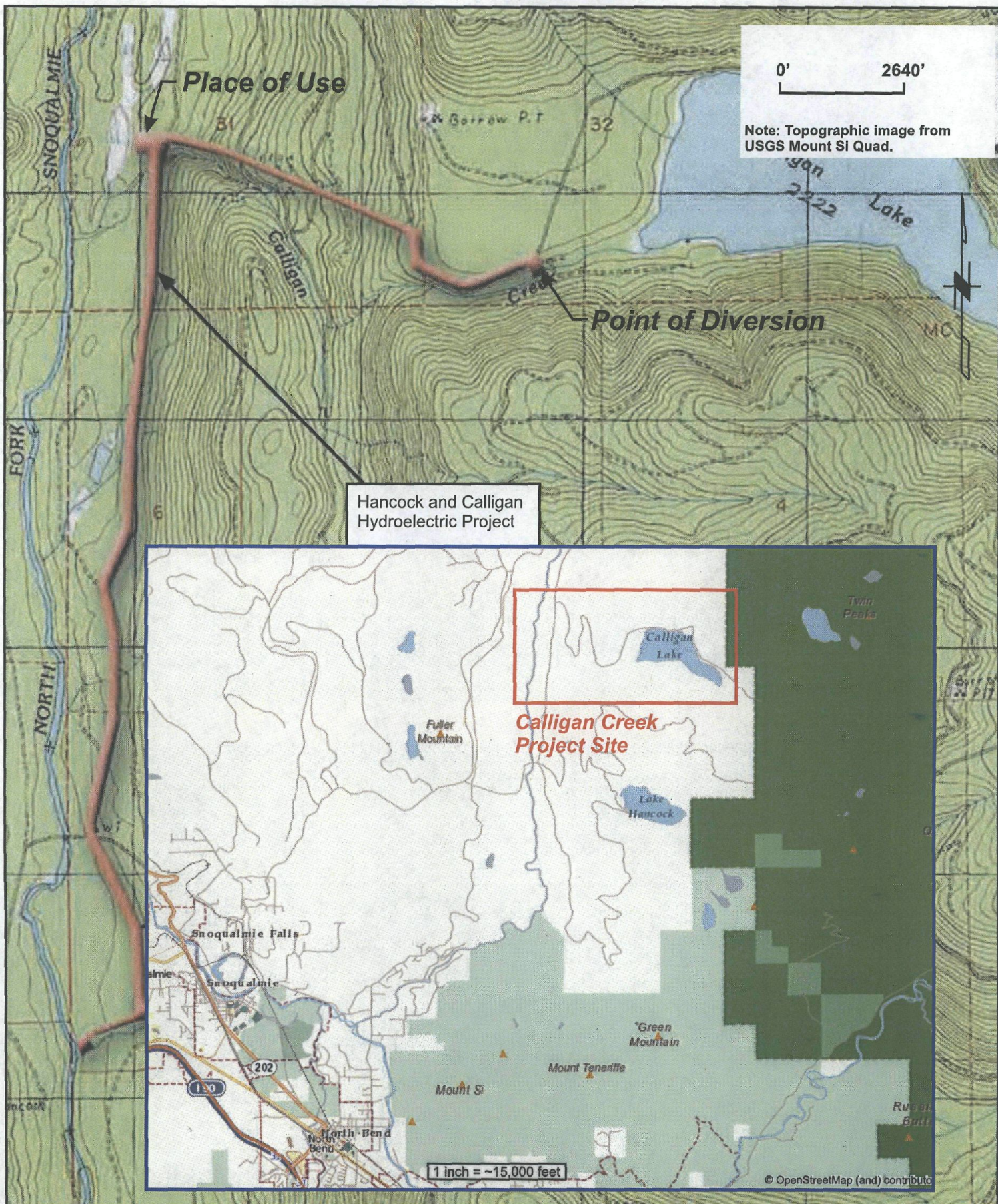


Figure 1  
Vicinity Map



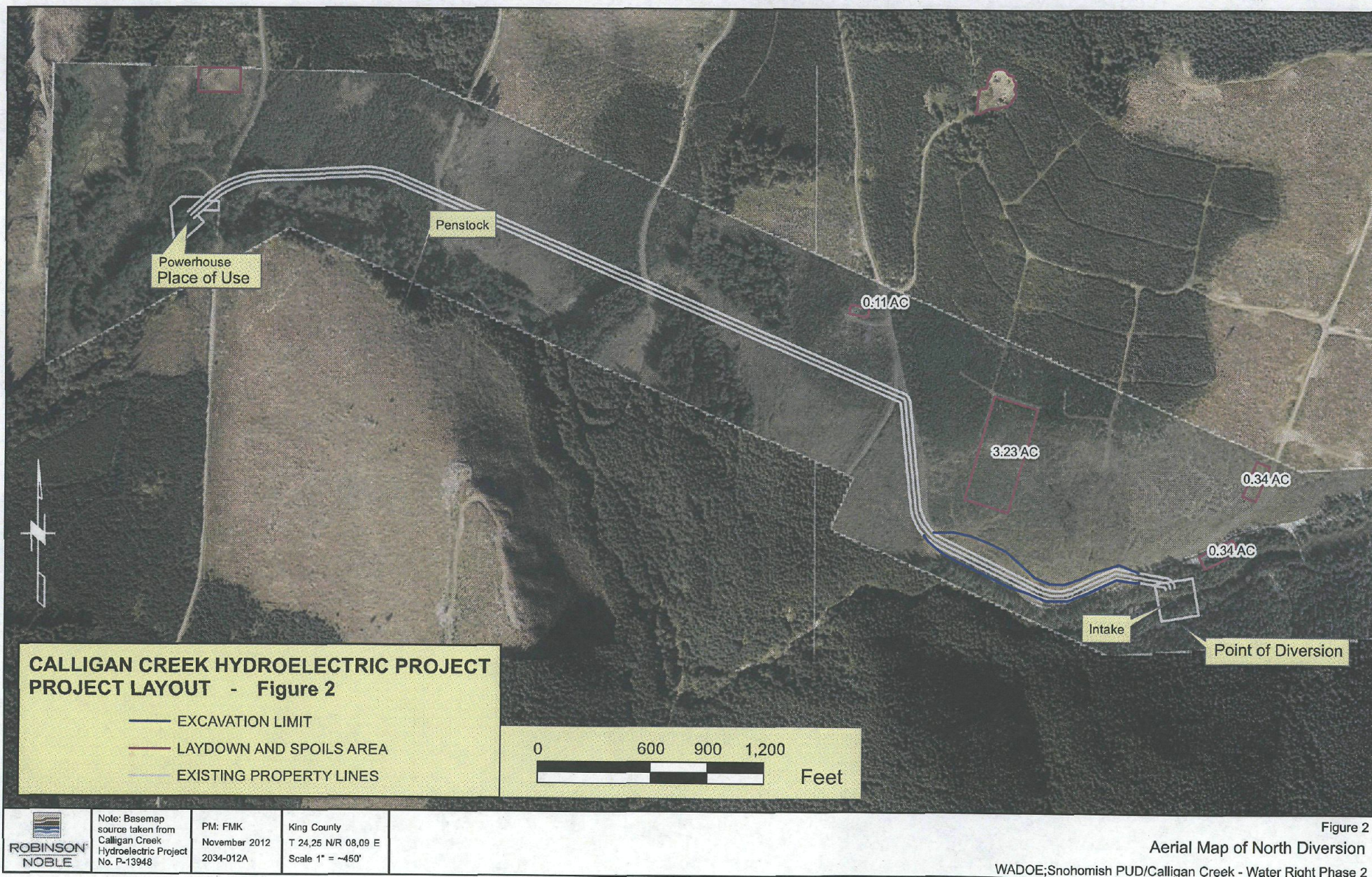


Figure 2  
Aerial Map of North Diversion  
WADOE; Snohomish PUD/Calligan Creek - Water Right Phase 2